TECHNICAL REVIEW DOCUMENT for OPERATING PERMIT 950PPB088

to be issued to:

CF&I Steel, L.P. Pueblo - Rod/Bar Mill Pueblo County Source ID 1010048

Prepared by Michael E. Jensen March 3, 1998

I. PURPOSE:

This document establishes the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the Operating Permit proposed for this site. It is designed for reference during review of the proposed permit by the EPA and during Public Comment. Conclusions in this document are based on information provided in the original application submittal of December 7, 1995, as well as numerous telephone contacts with the applicant.

II. Source Description:

The steel plant is located in Pueblo County at the south edge of the City of Pueblo, Colorado. The area in which the plant operates is designated as attainment for all criteria pollutants. The total plant emissions classify the plant as a major source with respect to Prevention of Significant Deterioration (PSD) requirements. The Title V application states the rod/bar mill is not subject to the provisions of the Accidental Release Plan of Section 112 (r)(7) of the Clean Air Act.

CF&I Steel, L.P. (CF&I) uses two (2) electric arc furnaces to produce steel. The steel is then used in the production of various steel products. CF&I elected to divide the plant by major production function and submit separate Title V permits for each production function. This places the compliance responsibility on the designated production manager making the operating, budget and scheduling decisions. For this document the word 'Mill' will be used to refer to the various processes related to the production function. The word 'Mill' is not referring to a separate facility. The following separate Title V permit applications were submitted for the CF&I plant:

Rail Mill 95OPPB086 Steelmaking 95OPPB097 Rod/Bar Mill 95OPPB088 Utilities 95OPPB098 Seamless Mill 95OPPB089 CF&I operated a wire mill at the time the Title V application was submitted. While the CF&I Title V operating permits were being prepared the wire mill equipment was sold to the Davis Wire Corporation. Davis Wire rents the wire mill building from CF&I, but has total responsibility for the operation of the wire mill equipment. The Division has made a determination that the wire mill is a separate source, and Davis Wire has submitted construction permit applications to become a synthetic minor for the provisions of Title V.

The Rod/Bar mill manufactures steel rods and bars. The rod and bar production process starts with billets produced by the steelmaking operation. As noted above the steelmaking process is addressed in a separate Title V application. The billets are color coded with paint to identify their intended use. The billets are passed through a heating furnace to raise the billet temperature to 2100°F. The hot billet is then passed through a series of rollers to shape the desired final product. The final products can be coil rebar, straight bundled rebar or rods. The coil rebar shapes are delivered to pouring reels for forming into the final product. The straight bundled rebar passes from the rolling mill to cooling beds, is color coded by size, and bundled for shipment. The rods pass to product storage or loadout.

The Title V application included a Rotoblast descaler addressed by Construction Permit 11PB584-1 and a bar grinder addressed by Construction Permit 11PB584-2. During the last stages of the preparation of the Title V draft permit, these two sources were sold. The Construction Permits were cancelled and the sources removed from the Title V permit.

The following tables display the Potential to Emit for the individual production processes as reported in the separate Title V applications, and the total Potential to Emit for the plant. The actual emissions reported in the Division database for the 1996 data year are included for comparative purposes.

ROD & BAR MILL
POTENTIAL TO EMIT, TONS PER YEAR

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	PM	PM_{10}	NO_X	SO_2	VOC	СО
Billet Furnace	1.97	1.97	216.2	0.24	0.55	15.7
Rolling Mill					24.0	
Paint Use					4.2	
TOTAL	1.97	1.97	216.2	0.24	28.8	15.7
Division Database - 1996 Actual Emissions	1.18	1.18	216.5	0.24	0.55	15.7

PLANT POTENTIAL TO EMIT, TONS PER YEAR

	PM	PM_{10}	NO_X	SO_2	VOC	СО	Lead
Rail Mill	1.80	1.80	198.3	0.20	12.4	14.4	
Rod/Bar Mill	1.97	1.97	216.2	0.24	28.8	15.7	
Seamless Mill	11.9	11.9	623.0	0.90	128.3	57.8	
Steelmaking	368.1	212.6	707.3	779.1	390.9	20,047	10.3
Utilities	273.6	163.1			50.3		
TOTAL	657.4	391.4	1745	780.4	610.7	20,135	10.3
Division Database - 1996 Actual Emissions	151.2	94.6	1,077	317.9	248.9	1,900	0.0017

PTE FACILITY EMISSIONS, POUNDS PER YEAR

	Rail	Rod/Bar	Seamless	Steel	Utilities	TOTALS	Division Database 1996 Plant Totals
Stryene 100425 ^a		43200	18000			61200	
Ethylbenzene 100414		4800	2000		268	7068	
Toluene 108883	6000	1600	5000		268	12068	4980
MIBK 108101	1600	400	1000			2800	
Arsenic Compounds				50		50	12
Cadmium Compounds				556		556	111
Chromium Compounds				1902		1902	689
Mercury				238		238	
Manganese				29460		29460	
Nickel Compounds				238		238	
Ferromanganese				6		6	
Silicomanganese				278		278	
Ferrochromium				20		20	

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Methanol 67561	2400	800		3200	
2-Butoxyethanol 111672		800		800	
Xylene 1330207		6600	538	7138	796
MEK 78933		4200		4200	
Trichloroethane 71556		180		180	
Glycol ethers	400	5800		6200	
TCA 79005			268	268	
Perchloroethylene 127184			268	268	320
Methylene chloride 75092	7000			7000	
Hexane					9560
Benzene					19414
Lead Compounds					533

^a Chemical Abstract Services identification number

Hexane, benzene and the lead compounds are reported in the 1996 database but not in the Title V application. These hazardous air pollutants were used in the past but were no longer in use at the time the Title V application was prepared. CF&I has not submitted a Revised APEN to report zero emissions for these hazardous air pollutants.

III. EMISSION SOURCES:

The following sources are specifically regulated under terms and conditions of the Operating Permit for this production center.

Billet Heating Furnace

- **1. Applicable Requirements:** The billet furnace applicable requirements were established by Construction Permit 93PB1073-5.
- **2. Emission Factors:** The furnace emission factors are taken from AP-42. There is no control equipment on the furnace stack so the emission factors can be combined with the fuel consumption to calculate the estimated emissions.
- **3. Monitoring Plan**: The billet furnace burns only natural gas. The estimated emissions are calculated based on the fuel use. Only the fuel use needs to be monitored. The Division accepts that the combustion of pipeline quality natural gas in this furnace is not expected to exceed the opacity standard or create significant amounts of sulfur dioxide emissions. The permittee is to provide an annual certification that only pipeline quality natural gas is burned.
- **4. Compliance Status**: The Division accepts that this source was in compliance at the time the application was prepared based on the information provided in the application and other information available.

Morgan 11" Rolling Mill

- **1. Applicable Requirements:** The rolling mill applicable requirements were established by Construction Permit 93PB1073-7. Since the area is in attainment for ozone only the Statewide requirement of Section V of Regulation No. 7 requiring the proper disposal of VOC materials applies.
- **2. Emission Factors:** The volatile organic compound (VOC) emissions for the rolling process are released from the rolling lubricant. There is no control device. The emission factor was determined from the permitted process rate and the VOC emission limit. Since the lubricant is purchased in bulk quantities it is expected the VOC and hazardous air pollutants would change significantly only when there is a change in the product used.

- **3. Monitoring Plan :** The emissions are related to the amount of steel processed; therefore, only the amount of steel processed needs to be monitored. The Division accepts that this type of VOC source is not expected to create opacity exceedances. On this basis, the permittee is to certify annually that the opacity standard has not been exceeded. The Title V application reports the lubricant does not contain any hazardous air pollutants. The operating permit requires the Material Safety Data Sheet (MSDS) for the lubricant be kept on-site to allow the Division to verify that the lubricant does not contain any hazardous air pollutants.
- **4. Compliance Status**: The Division accepts that this source was in compliance at the time the application was prepared based on the information provided in the application and the self-certification performed by the applicant.

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- **1. Applicable Requirements:** This source was grandfathered from the regulatory requirement for a construction permit. Since the area is in attainment for ozone only the State-wide requirement of Section V of Regulation No. 7 requiring the proper disposal of VOC materials applies.
- **2. Emission Factors:** A simple process related emission factor can not be developed for the paint VOC emissions because of the wide variation in the type of material used and the variation of the VOC content of the materials used in the painting process. The estimated annual emissions must be calculated from a material use inventory and the appropriate VOC content of the material.
- **3. Monitoring Plan:** The painting VOC estimated emissions will be calculated based on the material consumption as noted above. The Division experience has been that a monthly evaluation of the material use inventory provides for improved accounting of the use of the various materials. The emissions, however, will only be calculated on an annual basis. The Division accepts that this type of VOC source is not expected to create an opacity problem. The permittee must provide an annual certification that the opacity standard has not been exceeded.
- **4. Compliance Status:** The Division accepts that this source was in compliance at the time the application was prepared based on the information provided in the application and the self-certification performed by the applicant.

Insignificant Sources

Several insignificant sources of emissions related to this production process are noted in the Title V application. These were cited by the use of the general categories provided in the Title V application forms, and no specific source or equipment was noted. On an annual basis the applicant will have to review the estimated emissions from these insignificant sources to determine if they are still insignificant and in compliance.

Alternate Operating Scenarios

No alternative operating scenarios were identified.

Permit Shield

The intent of the permit shield is to provide limited protection to the facility in the event of an error in the evaluation of whether a regulation, or portion of a regulation applies. The facility identifies an issue and presents its position. The Division reviews the position. If the Division and the facility mutually agree on the position, the issue is recorded in the permit. If, at a later date, it is determined that an error was made in the mutual decision, the facility is protected from enforcement action until the permit can be reopened and the correct requirements and a compliance schedule inserted.

For this Title V application, where a request for the shield protection for a specific applicable requirement, or a specific section of an applicable requirement, and a proper justification provided for the request, the shield was granted. The permit shield was not granted for requests for a blanket protection from all portions of a regulation. The Division finds this type of blanket protection is too broad and general for the shield protection to be properly interpreted and granted.

Miscellaneous

From time to time published emission factors are changed based on new or improved data. A logical concern is what happens if the use of the new emission factor in a calculation results in a source being out of compliance with a permit limit. For this operating permit, the emission factors or emission factor equations included in the permit are considered to be fixed until changed by the permit. Obviously, factors dependent on the fuel sulfur content or heat content can not be fixed and will vary with the test results. The formula for determining the emission factors is, however, fixed. It is the responsibility of the permittee to be aware of changes in the factors, and to notify the Division in writing of impacts on the permit requirements when there is a change in factors. Upon notification, the Division will work with the permittee to address the situation.